

000, and besides these there are woollen mills, broom factories, lead and zinc works.

mills, broom factories, lead and zinc works, canning factories, linseed oil works, packing houses, paper mills, sorghum factories, patent medicines, and other enterprises too numerous to mention, aggregating more than \$40,000,000.

stock to the value of forty millions, makes a good showing for our young commonwealth. The President, chance does not govern the world, and the future of all of us is assured. The fertile soil and excellent climate is the cause of the phenomenal development of our agricultural resources, and the real source and greatest factor in the wonderful growth of our manufactures is our coal.

It is important then once more to indicate upon your figures, as the basis of the permanency of our supply. At Leavenworth we have a coal mine with ponderous engines and in its equipment is unsurpassed by any in the country. Here several hundred men are constantly employed and from the mine there pass seven hundred feet the shining miners' lamps, the surface of the rate of five hundred tons per day or one ton per minute at hoisting time.

At the penitentiary, four miles south and three miles west of Leavenworth, is another mine of equal depth and striking the same strata. Here also is now being mined 250 tons per day, and which is being rapidly developed to much greater capacity.

From these mines coal is shipped to all parts of the state. The quality is the best bituminous, and has contributed largely to the encouragement of manufacturing.

In regard to the permanency of the supply, John W. Hays, who has given the subject much study, in a report to the Leavenworth board of trade, says:

"Is this supply of coal permanent? If not, our prestige as a manufacturing center will depart. A few facts will show. The shaft of the Leavenworth Coal company is situated on the north-west corner of the reservation, on the northern edge of the city and ad-

bank of the Arissudri river. The pentagonal shaft, some four miles south of the southern city limits, and about three miles west of the other shaft, making the distance between them about seven miles. The rocks and formations at the sinking these shafts are the same, and here is no perceptible difference in the thickness or quality of the coal either; so that both the shafts are working in the same coal basin. There being no diminution in the thickness of this coal bed in the distance of seven miles south and

three miles west, it is safe to say and certain that the coal basin is at least twelve miles square, and covers an area of at least 144 square miles."

Now, Mr. President, let us see what supply we have in this twelve miles square. Practical tests in both mines demonstrate that in this vein of two feet in thickness 70,000 bushels of coal are obtained per acre, equal to 44,000,000 bushels for 1,840 acres, or 12 square mile, or for the 144 square miles 259,200,000 tons.

One thousand good miners will take out about 40,000 bushels or 1,500 tons per day. At this rate it will require the labor of 1,000 men for 576 years, or 5,000 men 115 years to wash out this area of twelve miles square.

It will be seen, therefore, that the supply of coal in the Leavenworth county is practically inexhaustible, even were 100 more shafts to be sunk.

But the coal deposit of Kansas is not limited by county.

The eastern part of the state from Marshall, Brown and Doniphan counties on the north to Osage, Cherokee, Crawford and Benton on the south is to a great extent underlain with coal.

■ Mining, perhaps, is prosecuted more vigorously in the four last named counties. There extensive mines have been opened, from which immense quantities of the best quality of bituminous coal are shipped daily.

Now, Mr. President, while it is generally

know that we have coal in Kansas, I do not believe that the quantity and value of this mineral deposit is generally understood and appreciated by our own people. I confess until I had made some calculation upon the subject, I did not fully realize myself the perpetual source of wealth we have in our coal mines. In Cherokee, Crawford, Bourbon and Osage counties it is safe to assume there is a coal belt covering an area of seventy by twenty miles, or 1,400 square miles.

A vein averaging two feet in thickness will give us 1,800,000 tons to a square mile, equal to twenty-five hundred and thirty million bushels of coal. A ton of coal is equal to about one cord of wood, so that the coal in this area of 1,400 square miles is equal to five thousand million cords of wood. Kansas comprises about 30,000,000 of acres. If one-half is coal, it is equal to 15,000,000 cords, so that there was a good supply of timber in sight. Yet if one-half of the entire state was covered with a forest of two hundred cords to the acre we would have five thousand millions of cords, a supply of timber for the most part retained in the coal beds of four counties; so that farmers or the manufacturers now here, or those who may come for generations hereafter, may rest assured that in Kansas the supply of coal will not fail them.

But it is not in coal alone that the miner finds wealth. There is also the iron and zinc mines are practically as inexhaustible as her coal, and of a richness and quality that have already established them in the markets of the world.

In various parts of the state, salt works are in operation, and large quantities of salt are procured from wells, the brine of which is more than ordinary richness.

Chalk and gypsum abound in paying quantities, and the deposits of limestone and sandstone are so extensive that the bulk of the Georgia, Kansas and the bulk of the

stone without exhausting the supply.

Mr. President, with such a wealth of mineral, and from the geographical position of our state, as the center of the Union, I can see no reason why, within the next twenty-five years, we shall not be among the chief manufacturing states of the nation.

To the press of Kansas more than to any other agency, we are indebted for the knowledge the world has obtained of our agricultural resources. We trust now that

those brainy enterprising editors will devote as much energy and ability to set forth the advantages that exist here for manufactures. Let it be known that immense quantities of coal are to be had here at a price of two cents on the Missouri river; that more than two-thirds of them are used upon farms west of Missouri, and that we have all the advantages for manufacturing these articles in Kansas. Why then should we continue to look outside the State for them?

Let us manufacture these articles ourselves and build up within the borders of our own State, the Pittsburg of America, and thus will we bring the consumer close to the door of the producer, affording to the Kansas farmer the opportunity to have a foreign market for the products of his farm.

In connection with this subject, we must not lose sight of the fact that natural gas, because of its convenience and cheapness, has become a great factor in manufacturing. It is already about one-third of all the establishments in Pittsburg and vicinity are using it, and if the discovery and development continues, it will be but a short time until all the machinery of that busy city will be kept in motion by gas.

Manufacturers from other parts of the country, attracted by it, are locating there, and that city will not only be the great manufacturing center of the east, but through

formed from the blackest to the cleanest and brightest in the country.

Kansas should ever be in the van of progress, and action should be taken at once to ascertain what there is for us 4,000 or 5,000 feet below.

A few thousand dollars judiciously expended in the line of geological survey might result in adding untold millions to the wealth of the state.

Let our legislators consider this matter.

Mr. President, every Kansan should feel proud of the progress already made in manufacture.

Even now as he journeys westward or east-